REMARKS

Applicants have amended the claims to more clearly and precisely define the invention and the unique aspects thereof.

The below remarks formalize in writing the discussions between the examiner and the applicant's representative on June 15, 2004.

Claims 1-3, 7, 8, 14-18, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Cressman (US 2,791,114). The examiner indicates that Cressman discloses a primer composition that comprises 1-26% of magnesium powder with potassium perchlorate and silicone resin. However, amended claim 1, requires the use of particular high temperature metal components, not including magnesium. Therefore, Cressman does not disclose one of the required high temperature metal components and cannot anticipate the present invention. Further, magnesium could not be used as the high temperature metal component in the present invention due too low of a combustion temperature to provide the flame temperatures of the present invention.

Claims 1-7 and 16 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Douda (US 3,411,964). The examiner indicates that Douda discloses a flare composition that comprises 62% of magnesium with sodium nitrate and silicone resin. First, a flare composition is far different in use and application than a combination delay element and ignition composition. Second, again, Douda does not disclose one of the required high temperature metal components as required by the amended claims, and, thus, cannot anticipate the present invention as claimed.

Claims 1-7, 9-18, and 20 stand rejected under 35 U.S.C. § 102(b) as being anticipated by Rink et al. (US 6,666,476). Specifically, the examiner states that Rink et

al. discloses an igniter composition comprising 10-60% of an Al/Mg alloy which contains 50-90% of Al and 10-50% of Mg, with an oxidizer from 30-80% and 1-10% silicone resin. The examiner further indicates that Rink et al. discloses an igniter composition that can be used in an igniter cord. First, the amended claims require potassium perchlorate as an oxidizer and Rink et al. does not disclose this oxidizer. Second, Rink et al. does not disclose an igniter composition that can be cured into a configuration for use as a delay element as required by the amended claims. Rink et al. merely discloses using an igniter composition that can be adhered to the surface of an igniter cord (see col. 10 lines 50-54). In fact, in order to be adhesive in nature, as is required by the Rink et al. invention, the composition disclosed in Rink et al. could not be cured. Therefore, because these elements are not disclosed in Rink et al., anticipation is no longer at issue.

Claims 8 and 19 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Rink et al. in view of Carlson et al. (US 3,945,322). Claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Carlson et al. in view of Gruber, Jr. (US 3,366,054). Applicant has taken these two rejections together, since they both rely upon Carlson et al. for a similar proposition. The examiner states that Carlson et al. discloses the use of a detonating cord that comprises magnesium, aluminum and potassium chlorate with a binder. However, applicants believe that the examiner has misinterpreted the Carlson et al. disclosure. Carlson et al. discloses using a detonating cord in order to initiate a sensitive deflagrating charge that comprises magnesium, potassium perchlorate, cupric oxide, and aluminum, preferably without a binder. While Carlson et al. discloses no amounts of the constituents of the deflagrating charge, since the charge is used as a loose powder, applicants assert that the Carlson et al. disclosure

did not contemplate the amounts used in the amended claims. This sensitive deflagrating composition is in no way linked for use as a delay element/ignition cord combination. Nothing in any of the references would imply such a use or lead one skilled in the art to modify the compositions disclosed in order to provide such a delay element/ignition cord composition. Therefore, applicant asserts that it would not be obvious to combine the references to obtain the present invention, first, because there is no impetus to do so, and, second, because all of the required elements are not disclosed or implied within the references. Applicants assert that, without the knowledge that the composition of the present invention, in the amounts stipulated, may be cured into a delay element configuration (such as a cord), one skilled in the art would never be led to combine references or change composition amounts to obtain the present invention.

Finally, claims 1-20 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith et al. (US 6,647,887) in view of Gruber, Jr. The examiner indicates that Smith et al. discloses an ignition fuze that comprises a mix of magnesium and aluminum with potassium perchlorate and a binder. The examiner further indicates that Gruber, Jr. discloses the use of RTV silicone rubber within an ignition assembly and that combining the references to obtain the present invention would be obvious to one skilled in the art.

First, nothing in either disclosure discusses or implies curing the components of the composition, having particular amounts of the ingredients, into a delay element/igniter cord as set forth in the present claims.

Second, while the applicant agrees with the examiner's assertion that varying amounts of particular ingredients to optimize the performance of an igniter might be

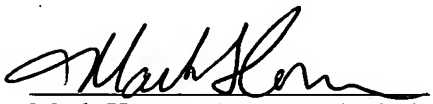
within the ability of one skilled in the art, varying the amounts of ingredients in order to produce a composition that is curable into a cord having high flame temperatures and a steady burn rate (so it can be used as a delay element) falls outside of this general proposition. Nothing in these or any other of the references suggests the above, and, therefore, any combination or change in the references by one skilled in the art would not be apparent.

Third, the Smith et al. reference is used, similarly to Rink et al. above, in order to make either an adhesive ignition material or a powdered ignition material. While no amounts are set forth, applicants again assert that the amounts could not coincide with those set forth in the amended claims or the composition of Smith et al. would not operate as described within the patent.

Therefore, applicant asserts that it would not be obvious to combine the references as the examiner suggests, and, thus, the above rejection no longer applies.

Accordingly, applicants believes that claims are in condition for allowance and respectfully requests the examiner to withdraw all objections and rejections and allow said claims. Should the examiner need more information regarding this matter or have further suggestions regarding this application, feel free to call the undersigned at 301-744-6668.

Respectfully submitted,



Mark Homer, Reg. No. 41,848
Attorney for Applicant

OFFICE OF COUNSEL, CODE OC4
NAVAL SURFACE WARFARE CENTER
INDIAN HEAD DIVISION
101 STRAUSS AVE., BLDG. D-326
INDIAN HEAD, MD 20640-5035